

CHICAGO OFFICE,  
40 La Salle Street.

MILWAUKEE OFFICE,  
124 Grand Avenue.



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1888.

1888.

CAWKER'S

## • AMERICAN FLOUR MILL AND ELEVATOR DIRECTORY •

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Is now READY FOR DELIVERY. This Directory is far more complete than any of the five preceding ones. Our long experience has taught us the wants of the trade, and we have used our best endeavors to meet them. The principal features are as follows:

- 1.—List of Flour Mill owners of the United States and Dominion of Canada, with Post Office address, County and State, and when information is obtained, the capacity in barrels of flour per day of 24 hours, kind of power used (steam or water), roller or stone system.
- 2.—Lists of Corn, Oatmeal, Rice, Feed Mills, etc.
- 3.—List of Grain Elevators and Warehouses.
- 4.—List of Millwrights.
- 5.—List of prominent American Flour and Grain Brokers.
- 6.—List of Foreign Flour and Grain Importers.
- 7.—List of Mill Furnishers, etc.
- 8.—Statistics valuable to the Trade.
- 9.—Millers whom we believe to be worth Ten Thousand Dollars or more will be indicated.

This directory gives the address of 16,062 Flour Mills in the United States and 1,714 in the Dominion of Canada. The additional lists of Feed, Corn, Barley, Oatmeal and Rice Mills, Elevators and Warehouses, Millwrights, Flour and Grain Brokers, Importers, etc., adds to the number of addresses several thousand. The COUNTIES are included in the address, and in cities, the street and number in most instances. We have had valuable aid in compiling this work from Secretaries of Boards of Trade, of Bureaus of Labor Statistics and Manufactures, from Railroad and Steamship Companies, from the milling and commercial press generally, and from mill and grain elevator owners themselves. That the work is *perfect*, we do not claim, for in the nature of things that is an impossibility, but as it is, it is indispensable to all desiring to reach the flour and grain trade of this country, and is *well worth the price asked*.

**Price of Directory, \$10 per copy, post paid to any address.**

If desired Directory will be sent by express C. O. D. Remit by Express or by Exchange on New York, Chicago or Milwaukee, or Post Office Money Order. Address,

E. HARRISON CAWKER, PUBLISHER,  
No. 124 Grand Avenue, MILWAUKEE, WIS.

GANZ & CO.

Budapest, Austria-Hungary.

We are the first introducers of the Chilled Iron Rollers for milling purposes, and hold Letters Patent for the United States of America. For full particulars address as above.

[Mention this paper when you write to us.]

BUY:  
Goodyear  
Rubber Co's  
RUBBER  
GOODS.  
THEY ARE THE BEST MADE.  
"GOLD SEAL" RUBBER BELTING,  
OAK TANNED LEATHER BELTING.



372 and 374 EAST WATER STREET,  
MILWAUKEE.

131 EAST THIRD STREET,  
ST. PAUL.

201 NICOLLET AVENUE,  
MINNEAPOLIS.

## THE UNITED STATES MILLER.

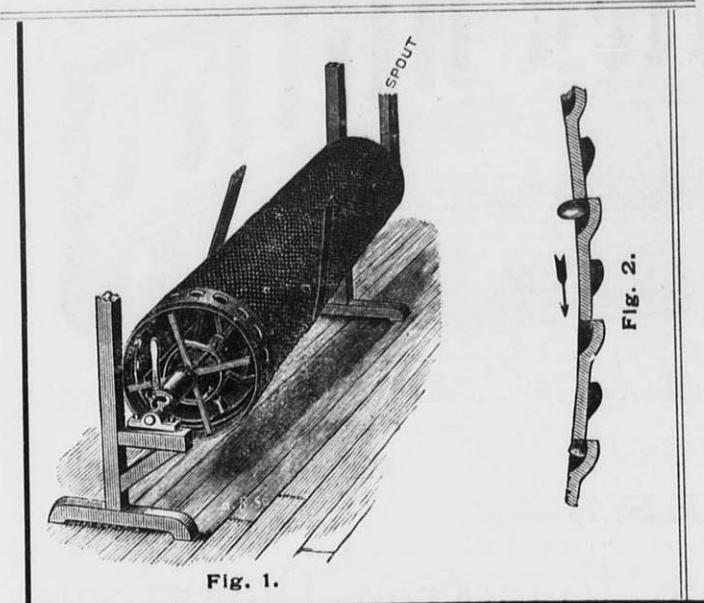


Fig. 1.

FIG. 2.

New Pat. Indentations. No More Zinc, but Iron and Steel Reels, Lasting Many Times as Long.

CUT herewith, FIG. 1, represents the PRINZ COCKLE MACHINE, single reel, without frame. FIG. 2, shows a section of the Indented Cylinder, and FIG. 3 is a large machine with grading reel. The inventor and manufacturer of this machine has had long and thorough experience in all departments of Grain Cleaning, and this Cockle Separator certainly has no superior. It is equally adapted to use in large or small mills, and the price is within the reach of all. The manufacturer has demonstrated that his machine removes more Cockle than other machines. It occupies but little space, and consequently any mill will have room enough in which to place it.

## ➡➡ CONSTRUCTION. ⬅⬅

The machine consists of a cylinder about 70 in. long and 16 in. diameter, mounted on a stationary shaft 82 in. long, which has to be supported at both ends—(either as seen in the cut, or it can be hung up under the ceiling or in any other suitable position.) Inside of the cylinder is a trough suspended on springs and agitated by the revolution of the cylinder itself, to receive the cockle which is carried up by the indentations of the cylinder and properly discharged into this trough. By the agitating motion of this trough the cockle is discharged at the front end of the cylinder. The wheat is entered at the end of the reel, and is rolling at the lower side of the same in the direction of the discharge, and by this rolling the cockle finds its way into the indentations and gets raised up and discharged into the trough. There is nothing complicated in the machine, consequently nothing can get out of order to make trouble and annoyance. It has only two bearings to oil, and if oiled once a day is all it needs, as it is running only at a speed of 18 revolutions.

The machine is entirely controlled by the operator, by a single lever seen at the front of the cut (Fig. 1), and it can be set either to take out any quantity of cockle, or if there is none in the wheat, it can be set to take out nothing. There is no machine in the market that has this device. The indentations are of a new design and protected by U. S. Letters Patent granted to F. PRINZ. This enables the manufacturer to indent sheet iron or steel plates, which are far superior in ensuring the durability of the machine than zinc, of which material all other cockle machines are now made. The machine is driven by simply taking a two-inch belt around the reel at any point. The Single Reel Machine (Fig. 1), has a capacity up to 20 bushels per hour. Cockle Cylinders are ALL made of the SAME SIZE and where greater capacity is required it is secured by a grading reel (patented by F. PRINZ), and guaranteed not to clog as other devices do, which separates the COARSE grains of wheat, from the SMALL wheat and cockle, and the latter (small wheat and cockle) will only go to the Cockle Cylinder for complete removal of the cockle. The Grading Reels are built of the proper size to furnish separated wheat and cockle for feeding one, two or more cylinders. All parts of this machine are very easily accessible, NOT ONE INSIDE ANOTHER and in a substantial frame, NO FAST MOTION, and very little power needed.

ALSO EXCLUSIVE MANUFACTURERS OF  
Prinz's Patent Improved Smutter, and Prinz's Patent Combined  
Dustless Oats and Screenings Separator.

FAUSTIN PRINZ,  
659 East Water St. Milwaukee, Wis.



## READ THE FOLLOWING TESTIMONIALS.

"CENTENNIAL MILLS," EVANSVILLE, Ind., June 14, 1877.  
FAUSTIN PRINZ & CO., MILWAUKEE, WIS.  
GENTLEMEN:—Inclosed please find check in payment of Cockle Machine sent us May 26, 1887. The Machine does its duty.  
Yours truly, J. W. LAUBCHER & BRO.

Office of "PHOENIX FLOURING MILLS," Waukesha, Wis., March 17, 1887.  
F. PRINZ, Esq.:—  
DEAR SIR:—Yours of the 16th inst. at hand. In reply to inquiries as to how we like your combined Separator and Cockle Machine, which we have now had running nearly a year, I can only say it is the boss. It displaced a well-known combined machine, and although yours was only guaranteed to do as much work as the one it displaced, I am glad to say it does THREE TIMES AS MUCH, and does it in first-class style. The old machine blew almost one-third of the scourings into the dust-room, while from yours we cannot find a kernel. The Oat Separator is as perfect as I have seen; the cockle it removes without wasting whole kernels of wheat; the suction is in perfect control of the miller; and last, though not least, it uses only half as much power as the machine it displaced. You are at liberty to use this recommendation, and if any brother miller's wish to see the machine in operation, we shall be pleased to show them. Wishing you all possible success, I remain,  
Yours respectfully, CHARLES G. DEISSNER.

Office of GALESBURG ROLLER MILLS, GALESBURG, MICH., Nov. 17, 1887.  
FAUSTIN PRINZ & CO., 659, 661 and 663 East Water St., Milwaukee, Wis.  
DEAR SIRS:—The Cockle Machine arrived in good condition. I could not procure a millwright, but the connections of your machine are so complete. I went to it myself and put it in and had it running in less than four hours. I have no hesitation in saying that your Cockle Machine is the best that I ever handled, being entirely under control of the miller; it does all you claimed and more; it not only removes all the cockle, but scours the wheat and removes the dust to my utmost satisfaction. I consider it a mite for space and a monster for the work it accomplishes. I displaced a rolling screen for your machine and assure you it is a profitable change.

Yours respectfully, M. W. MORTON.

Office of GEM MILLING COMPANY, Milwaukee, Wis.

Mr. F. PRINZ:—  
We have used your No. 3 Combined Grader and Cockle Machine two months and are much pleased with its work. The objectionable features of our former machine, which required constant attention, owing to Grader sieve becoming clogged and allowing cockle, seed, etc., to pass over with the wheat, are ENTIRELY OBLIVIATED in your machine, the work being always uniform, owing to Grader reel keeping perfectly clean, consequently all seeds, cockle, etc., must enter Cockle cylinders which remove them in a thorough manner, taking out very little broken wheat. We can use one or two cylinders as condition of wheat requires, and with cut-off arrangement on Grader reel almost perfect separations can be made. Requires very little power and space, and we think a much more durable machine than we formerly used.  
Yours truly, GEM MILLING CO. J. ZAHN, Supt.

RELIANCE MILL, Milwaukee, Dec. 19th, 1887.

MESSRS. F. PRINZ & CO., City.  
GENTS:—The Grader and Cockle Machine you put in our mill three months ago in place of the Kurth Cockle Machine, has given the best of satisfaction, as our wheat is unusually full of cockle, wild buckwheat and seed this year, is entirely cleaned from same by your machine without any loss of wheat. Respectfully yours, C. MANEGOLD & CO.

UNEQUALLED IN CAPACITY AND SIMPLICITY. ONE REEL  
WILL HANDLE 16 TO 20 BUSHELS PER HOUR.

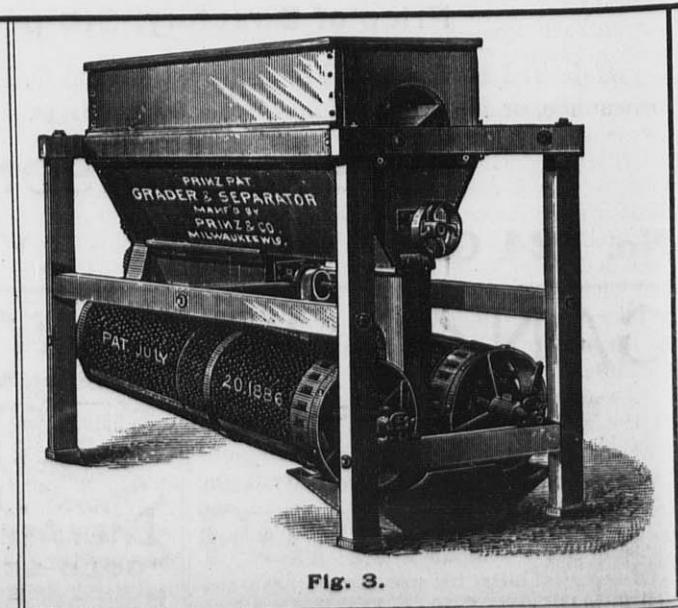


Fig. 3.

# The United States Miller



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## MILLING IN KANSAS.

We have just received through the courtesy of Hon. Frank H. Betton, Commissioner of Labor for the State of Kansas, a copy of his third annual report. So far as it relates to the milling industry of the state, the commissioner has spared no pains to get a complete and satisfactory report. From 450 sets of inquiries sent out, partial or full returns were received from 307 mills. The commissioner is to be congratulated on receiving so large a percentage of returns for (we judge from experience) if there is anything in the world that the average miller likes to postpone "till to-morrow," which too frequently means forever, it is the filling out of a blank asking questions about his business.

Commissioner Betton says: "The revolution undergone by this industry during the last few years in the substitution of the roller system for the time-honored buhr, has been severe. The change necessitated large outlays, and the result is that in common with so many other industries the business is concentrating in larger mills and heavier capital. With the extension of railroads into almost every portion of our state and the superior grade of roller flour, the old-fashioned local mill is "losing its grip." Flour is shipped in and wheat is shipped out, and the result is that the buhr-mill has to shut down or limit itself to custom work with a diminished output."

Further on, the report says: "Three hundred and seven mills report an invested capital of \$7,923,890, making an average of \$25,809 each against 322 reporting last year with a capital of \$7,379,950 and averaging \$22,919.23. It will be seen that the average amount of capital to the individual establishments is gradually growing larger, which is in accordance with the theory that the business is slowly concentrating and that the pioneer mills run on the old system are being abandoned or converted to other uses. That such is the case, I think admits of no doubt; and with the depression that has marked this industry during the past year, probably many of the newer mills have done very little business."

"Twenty mills use rolls alone, numbering in the aggregate 271 sets, producing 3,885 bbls. per day of 24 hours. Forty-nine mills use buhrs alone—111 in number, producing 1,940 bbls. per 24 hours. One hundred and eighty use rolls and stones, with capacity of 13,296 bbls. per 24 hours."

Of reported mills 169 use steam, 109 water and 18 both.

The report entire gives a very valuable insight into the condition of labor and manufactures in all branches throughout the state. The state of Kansas may well feel proud of having so able and industrious an officer as Mr. Betton.

## IMPROVED CONSTRUCTION OF GRAIN ELEVATORS.

A system of building and arranging the machinery for work in grain elevators which is designed to reduce the cost of erecting and equipping such establishments, and whereby the work may be systematized and facilitated and the running expenses reduced, has been patented by John A. McLennan, Chicago. The cupola, running longitudinally with the body of the building, is divided into four floors, in the following order, from the top down—machinery floor, garner floor, scale floor and spouting floor—the latter immediately above the bin floor in the body of the building. Near the longitudinal center of the structure are located a series of endless elevators, placed in pairs of one receiving and one shipping elevator, and extending below the basement floor, preferably through the same tanks, which are made of two depths, forming hoppers for the receiving and the shipping elevators and the boots thereof. The elevators extend to the machinery floor, and are all operated from the same shaft, a spout being attached to the head of each elevator to discharge the grain into either a receiving garner or its adjoining shipping garner, these garners each occupying a separate bent in the building. Below these garners, and on the scale floor, are located, respectively, the receiving hopper and the shipping hopper scales, likewise arranged in pairs, and in the same relation with the bents of the building and with the receiving and shipping elevators, there being an arrangement of spouts for directing the grain from the scales to the bins, or to any of the pipes for loading the cars. The lower ends of the bins may also be connected with the transfer or shipping elevators by the spouts leading thereto from the lower portions of the receiving hoppers.

The distance between the pairs of elevators is governed by the length of the cars in use, as there must be the length of one car between the pairs, in such manner that all the cars in a line may be unloaded simultaneously, the construction being such that both receiving and shipping may be conducted at the same time, with no loss of time or labor in shifting gangs of men, as is unavoidable under the old system, where the receiving

elevators are placed in one line, leaving the distance between the elevators nearly the length of a car, and locating the shipping or transferring elevators in one or more lines parallel to the receiving elevators, but in different lines of bents. By this arrangement, also, both the receiving and shipping elevator boots may be put in the same tank, thus making a saving in the cost of construction, while (the transfer or shipping boot being on a lower level) the transfer spouts may be passed below the railway tracks and be stationary and yet out of the way, the loading of the two elevators together causing only one bent to be obstructed, and the work of both the weighers and the machinery men is greatly facilitated.

## A GREAT CHICAGO ELEVATOR.

The strip of land in the north branch of the Chicago river, correctly called Ogden's Island, but commonly called Goose island, will henceforth enjoy a world-wide reputation as possessing the largest grain elevator in the world, says the *Times*.

The Armour elevator, which is now nearly completed, is a colossal structure. Its dimensions are 550 feet long, 160 feet wide, and 152 feet high. The largest lake vessels moored alongside of it look puny and insignificant. The Chicago, Milwaukee & St. Paul railroad track runs along the west side of the building, and a switch from the main line connects with a track running the entire length from north to south of the interior. An idea of the capacity of this Leviathan warehouse may be conceived when it is stated that an ordinary freight train of cars can be shunted into it and the huge gates at either end shut. When completed, it is expected to furnish storage for 2,000,000 bushels of grain.

The architects of the building are J. T. Moulton & Son. The principal work in the construction of the building has been done by Armour & Co. themselves. About 10,000,000 feet of lumber has been used in fixing up the interior. The engine, built by the Pusey & Jones company, of Wilmington, Del., is of 1,000 h. p., compound vertical, and stands about 40 feet high. It is the largest engine ever made in Delaware, and is a beautiful piece of workmanship. The power to feed this huge monster is furnished from four steel boilers which are 6 feet high by 18 feet long.

BURNED—The flouring mill owned by E. B. Kellogg & Co., at Wrightstown.

BURNED—John A. Deeter's feed mill, at Dixon, Ill.

## THE UNITED STATES MILLER.

## MILLERS' NATIONAL ASSOCIATION MATTERS.

[Official Circular to the Milling Trade.]

SECRETARY'S OFFICE,  
MILWAUKEE, Jan. 28, '88.

The Executive Committee, at a meeting in Chicago, January 19th, '88, adopted the following resolution:

*Resolved.*, That the secretary be and is hereby instructed to correspond with the principal exporting centres, embodying the views of the committee, requesting the various localities to call a meeting of the exporting millers in their vicinity for a discussion of the subject, and to give expression to their views in regard to the entire question of abuses in the export trade and their remedy, and principally, to state to what extent they will sustain the association in carrying out their wishes.

In the opinion of this committee, the export Bill of Lading now in general use, is responsible for a large part of the evils complained of, from the fact that under it the Transportation Company is bound only for the rate of freight, but exempt from every other liability; and inasmuch as the operation of the Bill of Lading extends from mill to market, the co-operation of the foreign receivers would seem to be a necessity; and to that end the secretary was instructed to correspond with representative bodies in the flour trade at London, Glasgow and Liverpool, and request that delegates be sent from these bodies to the convention at Buffalo.

The Association, through its Executive Committee, is willing and desirous of undertaking any reform of the abuses existing in the export trade, for the general good of its members. In undertaking the correction of these abuses, the *exporting millers themselves must come to an understanding with regard to their grievances; the necessary remedy; and last but not least, put themselves upon record to what extent they are willing to stand by the Association, and furnish the where-with-all to carry out the objects contemplated.*

To the end that the committee may have the fullest information, they would suggest that the millers in every locality, doing an export business, come together at an early date and discuss thoroughly every detail that has any bearing upon the subject; that they come to a definite understanding, and report to the Secretary their conclusion which will be submitted to the Executive Committee. A full expression from all sections of the country is desired in order that the committee may be fully informed on the following points:

*First*, what, if any, are the abuses pertaining to the export trade in each locality; and what changes have you to suggest in the existing custom?

*Second*, are your shipments handled with promptness and care from mill to seaboard? If not, over what portion of the route do you complain of neglect and delay?

*Third*, are you satisfied with the manner in which the transportation line or company by which you ship, handle your property while in transit from mill to seaboard? If more than one company, line or route, which do you find the most satisfactory, and which the most unsatisfactory?

*Fourth*, how about shipping and contracting freight by regular line, and on arrival at seaboard; the property so consigned being transferred to a different class of steamers known as "tramps?"

*Fifth*, what changes would you suggest in the existing form of Bill of Lading that will

form an equitable contract between the shipper, the transportation company, and the receiver?

These are but a part of the items requiring consideration. Others will suggest themselves during your deliberations. The committee desire all the information that can be furnished on this subject, in order that they may act understandingly.

I would say in this connection that since the report of the meeting of the committee was published, there has been received at this office a joint letter from the Boards of Trade of London, Liverpool and Glasgow, covering a pro-forma Bill of Lading, with the request that it be presented to the Executive Committee for such changes as they may have to suggest. From a *foreign receiver's* standpoint, this reform Bill of Lading may be acceptable, but is not entirely in harmony with the ideas entertained by the majority of the *exporting millers*. It will be submitted, to the committee with your suggestions, as the contribution of the foreign receivers, and as embodying their views.

Respectfully,  
S. H. SEAMANS, Sec'y.

[COPY.]

LONDON, 10th Jan., 1888.

DEAR SIR:

We are instructed by the committees of the London Flour Trade Association, of the Liverpool Corn Trade Association, and of the Glasgow Corn Trade Association, to submit to the consideration of your Executive Committee, the enclosed revised forms of through Bills of Lading, which have been drawn up, after careful consideration, with the view of remedying grievances, which have been long felt by those interested in the trade in this country, and which arise through the absence of responsibility (under the existing through bills of lading) on the part of the American transit Companies for the due forwarding and safety of the goods entrusted to them for transmission to this country. Our committees hope that your committees will approve of these revised bills of lading, and that they will use their influence in getting them adopted by the American transit companies, because their adoption generally by all interested in the trade between your country and ours, would, in the opinion of our committees, tend to facilitate business between the two countries. The uncertainties and risks consequent upon the through bills of lading at present in use, deter many buyers (on this side) from contracting for flour from your side.

Our committees would be glad to hear from your Association on the subject.

Communications thereon to be addressed to

MR. GEORGE R. BOWMAN,  
Hon. Secretary London Flour Trade Ass'n,  
38 Seething Lane, London, E. C.

Our committees desire that no alterations or additions be made to the enclosed bills of lading without their approval of said alterations or additions. There is a strong feeling in the trade (in this country) that business cannot be continued on the existing through bills of lading.

Respectfully,  
GEORGE R. BOWMAN,  
Hon. Secretary London Flour Trade Ass'n.  
JOHN HANNAY,  
Sec'y of the Liverpool Corn Trade Ass'n, Ltd.  
JOHN McDougall,  
Sec'y of the Glasgow Corn Trade Ass'n.

To S. H. SEAMANS, Esq.,  
Secretary Miller's National Ass'n,  
Milwaukee, Wisconsin, U. S. A.

Secretary Seamans replied as follows:

MILWAUKEE, WIS., Jan 28, 1888.  
Mr. George R. Bowman, Hon. Secretary London  
Flour Trade Association, 30 Seething Lane,  
London, E. C.

DEAR SIR:—I have the honor to acknowledge the receipt of your communication of the 10th inst., signed also by the respective secretaries of the Liverpool and Glasgow Corn Trade Associations, endorsing a pro-forma Anglo-American bill of lading, which, as requested in your communication, will be submitted to the Executive Committee Millers' National Association at their next meeting. As there is no definite date fixed for the meeting, I am unable at this writing to inform you as to the time when this matter will be taken up for consideration. It will, however, be forwarded to the members of the committee individually, in order that they may be prepared to argue fully its merits and propose any changes they may deem necessary when our meeting convenes. I would state in this connection, that our committee held a meeting in Chicago on the 19th inst., when this subject was brought up, as you will see per enclosed printed slip. As a result of that meeting, a circular letter is now in preparation for general distribution among the members, calling for an expression of each exporter's views individually, in order that all may be prepared at our annual meeting to act intelligently upon the subject.

Various interests differing widely must be taken into consideration, as our experience in dealing with similar undertakings warrants the belief that a full discussion and interchange of opinions are necessary in order to harmonize these various interests, and to formulate a set of rules, regulations, etc., which will prove satisfactory to all concerned.

I have carefully compared your pro-forma bill of lading with the one now in general use (modeled by the various lines centering at New York in conjunction with the committee of the New York Produce Exchange), and am of the opinion that our shippers will require other and more radical changes than your bill of lading contemplates. I apprehend, however, that nothing definite can be decided until the convention meets at Buffalo, to which, by direction of the executive committee at their late meeting, I am instructed to extend an invitation to your Association to send delegates, and I shall be pleased to receive from them an acceptance of this invitation. I am, Sir,

Yours Very Respectfully,  
S. H. SEAMANS,  
Sect'y M. N. A.

[LATER.]

MILLERS' NATIONAL ASSOCIATION,  
SECRETARY'S OFFICE.

MILWAUKEE, Feb. 13, 1888.

Since the issue of my circular, dated Jan. 28th, pertaining to abuses in the export trade, I am in receipt of two letters from foreign receivers, extracts from which are as follows:

(No. 1) London, E. C., Jan. 21st 1888. "With regard to delays in transit the *Furness Line* has seriously disappointed us and our customers, and we must leave you to ship by those lines recording good time."

We understand that an agreement has been mooted by the several Steamship Co.'s to make a quay rate of 1s. 6 (one shilling and six pence) per ton on flour on the plausible plea of CONVENIENCE to CONSIGNEES, which is quite fallacious. Such a clause amounts to an import duty of 2d per 280 lbs. And the unfairness of such an imposition is manifest by THEIR NOT SUBJECTING WHEAT to the same base AS THE MILLERS HERE WOULD NOT STAND IT. We hope your Association will closely watch any such specious innovations, and at the same time purge THE PRESENT BILL OF LADING of many obnoxious clauses,

by which the Transport Co.'s contract themselves out of their proper liability, as in its present condition London bankers will not advance upon it; and upon appealing to the COURTS our JUDGES *only laugh at our being so foolish as to be a party to so one-sided and indefinite a contract.*"

(No. 2.) LONDON, E. C. Jan. 24th, '88.

"You are probably aware that there is a move being made by a combination of the steamship owners of the regular lines, and the dock companies here, to force a bill of lading upon the trade generally, the great new feature of which is that a charge of 1-6 (one shilling and sixpence) per ton shall be made to the consignees of all flour landed in London. This charge of 1s 6d a ton will simply relieve ship-owners of a charge which they now pay for the use of the docks, throwing the burden upon the receiver and we wish you to clearly understand that if you find it impossible to obtain any other bill of lading than one including this clause you must please deduct same JUST AS IF IT WERE FREIGHT.

We may also remark that this scheme can only result (if successful) in the extra charge COMING OUT OF THE POCKET, ULTIMATELY, OF THE MILLER. We sincerely hope that you millers will be strong enough to resist altogether this attempt to throw upon you a charge which rightly belongs to them.

The London Flour Trade Association has taken this matter up and together with the Glasgow and Liverpool Associations has forwarded to your Association a proposed Bill of Lading drawn up in the interests of all classes; by which at any rate *some* of the difficulties may be obviated if we can only succeed in interesting millers on your side in this most necessary reform and impressing them with the IMPORTANCE OF SAME."

These facts are submitted through the courtesy of the milling press to all millers interested in exporting their product. The receiver is willing to cry "fire," but is evidently unable or unwilling to either carry water or "man the brakes." It is therefore left for our millers to take the prompt and efficient action necessary to put out the "fire."

The London Flour Trade Association might reasonably be expected to resist any imposition of this kind at their own thresh-hold, in the interest of their shippers, but like the receiver, they are perfectly willing to shift the burden from their own to other shoulders.

If the contemplated arrangement is carried out, the exporting miller is burdened with another expense amounting to about 2 1-5 cents per bag of 140 lbs., or \$30 per day to a mill turning out 1000 barrels. Are you willing to quietly submit and allow this tax to be loaded upon you in the interest of the steamship company?

I trust this effort to still further reduce the little margin left to the miller will cause an increased attendance to every meeting of millers for the general good, be it local, state or national, realizing the fact that every success which has been achieved in the line of reform or protection to the milling interest has been through united effort.

Respectfully,

S. H. SEAMANS, Sec'y.

P. S.—Since the foregoing was put into the hands of the printer, the following cablegram has been received from Glasgow:

"Tension continues between receivers and shipping companies, regarding landing charges, as President of the Millers' Association officially resist threatened reinsertion in the Bills of Lading the master portage clause.

#### ON BEHALF OF GLASGOW TRADE."

This is but another intimation to the Association that our foreign receivers have no idea they will be able to cope with any of the many innovations which are being "cooked up" to hamper the American miller in getting his product from "mill to market." In calling the attention of millers to these matters, I cannot too firmly impress upon them the necessity of united action. Do not leave the entire work and responsibility to the Executive Committee, as they must have the backing of local organizations to carry out successfully any reform.

S. H. SEAMANS, Sec'y.

#### COMPRESSED AIR POWER.

An engineering scheme of a novel character and one fraught with important consequences for power-users in all parts of the country is now, at length, after many hindrances and delays, in fair way of being realized by the approaching completion of the first part of the works of the Birmingham (Eng.) Compressed Air Power Company, limited. There is nothing absolutely new, of course, in the employment of compressed air for motive purposes. In Paris, Popp's system, covering an area nearly equal to that undertaken in Birmingham, has been in operation over five years, for the synchronic working of clocks. At Eastbourne, Warrington, Southampton, and other places, compressed air is used in connection with a pneumatic drainage system. In Liverpool blocks of warehouses are fitted up with hoisting apparatus, worked by the same convenient and docile power, and in many collieries and private works in various parts of the country it has been found advantageous to discard more modern motive agents in favor of this primitive propelling force. Birmingham, however, is the first place in which it has been adopted as a common motive-power, supplied from a central source for driving general machinery, and its application here, therefore, is distinctly a new departure involving important and far-reaching issues. It is about four years since the present project assumed shape, and more than twelve months have elapsed since the works' contracts were placed, but the company have had many unforeseen difficulties to contend with, not wholly of a financial or engineering kind. Parliamentary powers had to be obtained, the local authorities propitiated, the opposition of vested interests overcome or appeased at every step, and even the requirements of the municipality for safeguarding the network of gas and water pipes, sewers, and tram lines with which the streets of the town are intersected, have added not a little to the embarrassments of the promoters. Now, however, that the experimental works are at length, within a measurable distance of completion, it is evident that, however bold and novel the undertaking, there is nothing chimerical or impracticable about it, and that, whatever the ultimate commercial results, the mechanical and engineering problems involved are comparatively easy of solution.

There is clearly no reason why driving-power should not be supplied from a common centre, in the same way as gas, water and electricity, and compressed air seems to offer many advantages for this purpose over steam and other motive agents, which are subject to heavy waste in transmission, or require new and costly appliances. In the first place, air can be applied to existing engines without necessitating any change of plant or other expense beyond that incidental to connection with the air mains, and this cost is more than counter-balanced by the gain in getting rid of boilers and furnaces, with their necessary attendants. Then in place of smoke, exhaust steam, ashes and condensed water, the only waste of the pneumatic system is pure air, which can be used to assist the ventilation of workshops, as well as to expedite many manufacturing processes in which atmospheric currents are needed. With a stream of compressed air constantly laid on, and available at any moment by the simple turning of a tap, no time need be lost nor fuel expended in getting up steam. The wear and tear of boilers, firebars, etc., is entirely obviated; no cleansing of flues, removal of refuse, or insurance of boilers is needed; the risk of boiler explosions and of the bursting of steam pipes in frosty weather entirely disappears; the smoke nuisance is abolished; and last, but not least, the power is supplied on terms with which neither steam nor electricity can pretend to compete. How far the company are correct in their calculations experience only can determine; but if it be true that they can afford to supply compressed air at a rate equivalent to a little over £13 per indicated horse-power per annum, as against the general average here of £17 13s. 8*½*d. per indicated horse-power for all engines up to twenty-five nominal horse-power, the money-saving offered by the substitution of the new for the old motive agent, should be something like 20 per cent. That is to say, for every owner of an engine estimated for rating purposes at twenty nominal horse-power, or sixty indicated horse-power, the saving per annum should not be less than £200, to say nothing of the gain in space, comfort, cleanliness, etc. From the user's point of view, these are certainly potent arguments in favor of wind as compared with steam.

**SHE TOOK THE HEN.**—Young Mrs. Popinjay (at market for the first time)—"Are you sure this chicken isn't an old hen? It feels very tough."

Marketman—"I can assure you ma'am, that fowl is very young." (Opening the bill of the biped,) "See—it hasn't a single tooth yet."

Mrs. Popinjay takes the hen.—*Burlington Free Press.*

SOME years ago Phil. Armour, the Chicago millionaire, was figuring in a big real estate transaction. The sharpers thought they had him, but were soon convinced that they were wrong. They had tried to get him to drink several times while the dicker was going on, but he was not drinking any. After the deal was over Phil. said to the chaps he had gotten the best of: "Now, gentlemen, you must have something with me, and taking them into a small room where there was a pitcher and several glasses, he opened a little tin box and said: "Help yourselves." The tin box contained seidlitz powders.

## UNITED STATES MILLER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

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For estimates for advertising, address the UNITED STATES MILLER.

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MILWAUKEE &amp; CHICAGO, FEB., 1888.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER. You will thereby oblige not only this paper, but the advertisers.

BURNHAM BROS., York, Pa., say orders for their Turbine wheel have doubled since selling direct to mill owners at net prices. Send for catalogue.

THE citizens of Windfall, Ind., want a good roller mill at that place, and among other inducements which they offer is that of free natural gas.

SEC'Y HALIDAY, of the Indianapolis Board of Trade, furnishes the U. S. MILLER with the following statement:

"The daily capacity of Indianapolis flouring mills is about 3,000 barrels. Manufactured during 1887 about 500,000 barrels. Storage capacity of grain elevators, 1,000,000 bushels."

A NEW and perfect Bill of Lading for the Export trade appears now to be of paramount importance. It will necessarily take some considerable time to get a form that will be satisfactory to the exporter, the transportation companies and the importer, but no doubt it can be done, and the interest in the matter now seems to be so thoroughly aroused that it will be done. The circular of Sec'y Seamans, of the Millers' National Association, on this subject in another column will be read with interest.

THE Michigan railroads are considering the advisability of selling 5,000-mile tickets at two cents per mile. Why should a move of this kind be limited to Michigan railroads? Why would not a 5,000 mile ticket good on any road in the country fill a want long felt? The railroads may have valid objections to a move of this kind, but we think the commercial traveling public or the tourist would take to it like a duck to water.

THE report of the governor of Utah Territory to the U. S. secretary of the interior for 1887 says in relation to flouring mills: There are in Utah 120 flouring mills, 10 of which are roller, or new process. The product of the best of these is not excelled in quality by any in America. The aggregate capital invested in this industry is \$1,375,000; the annual product is 109,840,000 pounds of mill

stuffs, valued at \$2,288,000. Such is the extent of our flouring mill interests that nearly all of these mill are in operation the year round. In addition to these there are mills for the manufacture of oatmeal, rolled oats, cracked wheat, hominy, pearl barley, and other farinaceous goods.

CAWKER'S AMERICAN FLOUR MILL AND GRAIN ELEVATOR DIRECTORY FOR 1888, just issued (published by E. Harrison Cawker, Milwaukee, Wis.), shows the number of flouring mills in the United States and Canada by States and Provinces as follows:

## FLOUR MILLS IN THE UNITED STATES.

Alabama .....	192	Mississippi .....	189
Arizona .....	9	Missouri .....	815
Arkansas .....	215	Montana .....	14
California .....	158	Nebraska .....	270
Colorado .....	48	Nevada .....	11
Connecticut .....	177	New Hampshire .....	142
Dakota .....	121	New Jersey .....	343
Delaware .....	68	New Mexico .....	18
District of Columbia .....	3	New York .....	1521
Florida .....	29	North Carolina .....	431
Georgia .....	324	Ohio .....	1068
Idaho .....	15	Oregon .....	126
Illinois .....	742	Pennsylvania .....	2180
Indiana .....	745	Rhode Island .....	34
Indian Territory .....	3	South Carolina .....	193
Iowa .....	529	Tennessee .....	498
Kansas .....	439	Texas .....	451
Kentucky .....	496	Utah .....	88
Louisiana .....	19	Vermont .....	168
Maine .....	194	Virginia .....	471
Maryland .....	221	Washington Territory .....	54
Massachusetts .....	244	West Virginia .....	313
Michigan .....	6-8	Wisconsin .....	634
Minnesota .....	349	Wyoming Territory .....	2
Total .....	16,062		

## DOMINION OF CANADA.

British Columbia .....	7	Ontario .....	918
Manitoba .....	44	Prince Edward Island .....	16
New Brunswick .....	104	Quebec .....	479
Nova Scotia .....	68		1,634

The total number of mills in the United States reported in the 1886 milling directory was 16,950 and in Canada 1,634. The number of mills in operation has slightly decreased, but we believe the total capacity for the manufacture of flour to have increased. A number of large mills have been built and many have increased their capacity. The oatmeal, corn mills, etc., which were heretofore included in the regular list of flouring mills, are in the present list eliminated and are noted in lists by themselves. As it is, the milling capacity of the country as a whole is greater than there is a demand for.

IN the January number of the UNITED STATES MILLER we republished an article contributed by W. A. Thoms, of Scotland, to *The British Baker, Confectioner and Purveyor* (London), entitled, "A Case of American Flour Shortage." We publish the reply in this issue. The article implied serious charges against a Milwaukee miller, facetiously called "Ah Sin," i. e. a shortage on 457 out of a shipment of 1,000 bags. The article, as republished, has attracted much attention among American flour exporters, many of whom have suffered outrageously by the exactions of *tricky* importers on the other side. While the world stands, there will no doubt be dishonest men in all lines of trade, but we believe the milling and grain trade generally to be as free of dishonest or questionable practices as any branch of business under the sun.

If a shipment of flour by an American miller falls into the hands of a dishonest importer, it is an easy matter for him to make unwarrantable charges and demands for damages, and such has been the case. For instance, we know of a case in this city where the weight of every sack was carefully

registered and samples reserved for comparison in case of any claims being made for damages, and claims were made for shortage in weight and variation from samples. In this case the exporter was prepared and refused to allow a cent for damages claimed, and DEMANDED an investigation by the British arbitrators, who failed to find the claims sustainable. In regard to the shipment made by "Ah Sin," we do not by foregoing remarks desire in the least to imply that the importer was dishonest, but if the statement made by Mr. Thoms is correct, as we say in this country, "there certainly is a screw loose somewhere." The shortage must have occurred at one end or the other of the line or in transit. The difficulty is to ascertain, where.

For this and other purposes equally valuable to the American flour exporter the Millers' National Association have long contemplated and we hope may soon put in operation a bureau which cannot but prove of inestimable value to both exporter and importer. The members of the Association have had these abuses brought to their attention so often that OVER THREE YEARS AGO THEY HAD SPECIAL WORDS ADDED TO THE CABLE CODE BOOK most frequently used by flour exporters and importers to meet their wishes for expression in cases such as had occurred or were liable to occur.

There is one thing that should be thoroughly understood, and that is that every dishonest exporter hurts every honest exporter and every dishonest importer hurts every honest importer. Black list them, say we.

## A CASE OF AMERICAN FLOUR SHORTAGE.

REPLY OF "AH SIN."

Editor United States Miller:

Dear Sir—In the January number of the UNITED STATES MILLER you republished an article with the above caption. Will you kindly oblige me by inserting my answer here-with enclosed in your widely circulated and valuable journal, and oblige AH SIN.

February 14th.

MY DEAR MR. W. A. THOMS:

You were introduced to me by an article in the *British Baker, Confectioner and Purveyor* as an amateur writer, whose specialty is the humane work of controlling the morals of the people in the flour business. Such an humane undertaking is quite commendable, and if properly done, cannot fail of good effects. The story of the flour dealer who ordered light weight for a corresponding reduction in price, so that he could beat all his neighbors, was quite interesting. That fellow must have died soon, else we would have heard more of him. Through the kindness of our mutual friends, Messrs. A. & L., you read one of my letters to them, which fact initiated our acquaintance; I wish that you could have read all our correspondence, so that our acquaintance would have been more complete. I call your attention specially to my letter of August 23d, and their answer Sept. 10th. I will quote a part of the letter in case they did not take a copy of it. It says: "Many thanks for your liberal treatment." The rest of the letter would not interest you.

Allow me, dear Mr. Thoms, to express my opinion that you could devote your valuable time and efforts more usefully than by turning your attention to the doings of the American millers. They can afford to be honest, because they are excellent mechanics and fearfully hard workers, and they do as much work in one hour as others in four. Now consider that they work 24 hours every day and if you learned some figuring you will get at the result. This is the reason why you get the flour so cheap from them. Of course they are also apt to make mistakes, and if proved

to them, they are willing to pay for the damage. I would also not hesitate a moment to pay that little bill of *Five Pounds* for the shortage on the *1000 bags "Starlight,"* if I was to blame for it, but I know that it is not my fault and so, Mr. Thoms, it would be wrong on my part to pay it under such circumstances, because it would mislead you in your humane undertaking. Let me tell you why I am so positive that I am not to blame for this shortage: The weighing in my mill is done in the same way as probably in most of the merchant mills of this country. The packages are weighed on a small Fairbanks platform scale of 400 lbs. capacity with a very sensitive balance beam. The weight is screwed down firmly for 140-lbs. packages on the 40-lbs. notch in the beam. Any difference between  $\frac{1}{2}$  lb. and lighter would let the balance go down, and overweight with in  $\frac{1}{2}$  lb. would likewise raise it up. If the weight on the notch were not fastened firmly to the beam, it could not fail to be noticed by the packer, because it would shift every time the flour package is placed on the platform and the balance beam would rise. The packing at my mill is done by a day crew and night crew changing off every twelve hours. The foreman of the packing department weighs every morning some bags of the night packing; during the day time the weighing is done under his eyes. My head-miller weighed at irregular times about once a week some of the packages and did not report any great differences. Sometimes a few bags  $\frac{1}{2}$  to 1 lb. under; but also as much over-weight—too slight differences to find fault with the work of the packers. I do not think that a better set of employes could be found than in my mill. They are sober, cheerful and reliable. They are well paid and therefore contented. Only three changes happened in the last four years. One of them on account of old age, another changing from laborer in my mill to teaming for my mill, but not now in my employ. The 1000 bags "Starlight" were made during two days and two nights run of the mill; therefore both the day and night men must have done wrong weighing, and at different times; and if they had been careless in weighing, it is not to be presumed that the difference would show only in one way—that is only *underweight*. Do you not think, dear Mr. Thoms, that some bags would show overweights? Please think it over and you will find that mistakes alone could not have caused so much shortage. Dismissing the idea of carelessness, only one more point has to be looked into and that is, stealing or dishonesty. This could be done by the employes for their own benefit alone or in collusion with the employer. Now Mr. Thoms, does it not occur to you as improbable, that the employes, if bound to steal, would take the unnecessary trouble of taking out of each bag a few pounds and put the small stealings in one bag, if they could do it so much easier, stealing whole packages? The chances for detection are less in the latter way than in the former. This would not work long and profitable, and does not help you in your investigation.

The theory of collusion, speaking the detectives' language, does not seem to be tenable. It is not likely that a manufacturer would go to his employes and tell them: "you weigh the packages short 3 to 5 lbs." All the discipline and authority so essential for the successful management of any factory would be surrendered at once, and no establishment could exist under such mismanagement.

Now comes the bag question. I inclose here-with a certificate from the manufacturer of the bags which I used for the 1000 bags of "Starlight," by which certificates you will find, Mr. Thoms, that I used the best quality bags, known as the 1st Grade weighing from 14 to 15 ounces, Gilroy's make. Of over one hundred thousand bags sent out by me during 1887 I had two complaints reported on each 1000 bags for shortage, both complaints from Glasgow, but I do not believe that the shortage happened through poor quality of the bags. These are the circumstances under which the 1000 bags "Starlight" have been shipped out. Now, my dear Mr. Thoms, let us examine how the flour arrived in Glasgow, and the conclusion drawn by you therefrom.

It excited the writer's suspicions right-away, because the name of the miller was no

on the bags. My dearest Mr. Thoms, don't you know better? The importers would not allow us to put on our own names, because if we did, they could not buy the flour any more from Tom, Dick and Harry. There is a line of work for you, Mr. Thoms! teach the importers to have miller's name on the bag, so that he gets some of the credit due him for doing good work. Now it hardly pays, because we cannot retain the trade, if you do not always make the lowest price.

You stated the short-weights as follows:

12 bags from 19,	17 to 6 lbs.
10 "	5 lbs.
122 "	4 "
250 "	3 "
65 "	2 "

457 bags falling short; balance to be presumed to have held out weight. You think, Mr. Thoms, that the big shortages do not make the case suspicious. You believe that these big shortages happened undoubtedly because the bags were torn or burst. You did not say that anybody ascertained, whether 12 or more or any bags had been torn or did burst and why this happened. It seems to me. Mr. Thoms, that you did not have a very good basis for your presumption, that only and just 12 bags with big shortages were torn and burst. I think you should not have drawn such a distinct line without any information of facts. Might not some of the other bags have been misused during transportation? There is another field for your humane disposition. Whenever you hear of another big shortage you could investigate, in what condition the flour arrived, through whose hands the flour passed after arrival and so on. You will soon find out yourself how to proceed and if there is any expense to it you will find almost every American miller will pay his share; *I promise you to pay my share.*

And now, my dearest Mr. Thoms, I cannot possibly chat any longer with you and pray do not ask any more such letters from me. You may believe me, my regular work does not allow me sufficient time for it.

Good bye.  
Yours faithfully,  
AH SIN.

The following is the certificate above referred to, and original can be seen in my office at any time.

Jan'y 30th.

To Whom it may concern:

We hereby certify that we have sold to \_\_\_\_\_, proprietor of the \_\_\_\_\_ Mills, 140 lbs. Export Sacks for a number of years, and we always supplied him with our best quality, such as is known in the trade as F Grade, weighing from 14 to 15 ounces each, and made from Gilroy's best mangled goods, which are understood by all users of Burlaps to be the best article in the market for making Jute export sacks.

JOHN F. BAILEY & CO.,  
22 South-sixth st.,  
Philadelphia, Pa.

[Compiled from official records, for the UNITED STATES MILLER.]

FLOUR MANUFACTURED IN ST.LOUIS IN 1887.

	NAME OF MILL.	BBLS.
Geo. P. Plant Milling Co.	Plant's Roller.(3)	260,338
Regina Flour Mill Co.	Regina	220,993
Kauffman Milling Co.	Anchor.(1)	184,442
Kehlor Bros.	Kehlor	181,982
Camp Spring Mills Co.	Camp Spring	172,729
Kel'r Bros	Laclede	130,626
Victoria Flour Mill Co.	Victoria	127,002
Hezel Milling Co.	East St. Louis	112,613
E. O. Standard Milling Co.	Park.(5)	110,649
Sessinghaus Milling Co.	Jefferson	99,150
E. O. Standard Milling Co.	Eagle.(4)	89,086
E. Goddard & Sons Flour Mill Co.	United States	77,250
Kauffman Milling Co.	Park.(2)	69,569
Saxony Mill Co.	Saxony	54,006
H. B. Eggers & Co.	Meramec	48,003
Lallemand Milling Co.	Carondelet	27,287
Hy Kalbfleisch & Co.	St. Georges	20,000
Total	1887	1,985,717
"	1886	1,807,956
"	1885	1,841,529

- (1) From July 1st.  
(2) From Jan'y 1st to June 16.  
(3) For 10 months.  
(4) To June 6, mill burned.  
(5) From July 1st.

WHEN the Keely motor successfully motes, when a man serenely in atmosphere floats, when Yankees are brought to the eating of oats, when motion perpetual shall be achieved, when cyclone pulverizing is proved and believed and when grinding pneumatic is else than conceived, we shall look to see some inventor successfully utilizing the power of Niagara River at its exit from Lake Erie. Meanwhile said inventors are writhing their collars in struggling to acquire the Buffalo prize of \$100,000!—*The Milling World* (Buffalo, N. Y.)

#### PUBLICATIONS RECEIVED.

THE *Art Amateur* for February gives a delightful colored portrait study of a little girl, by Ellen Welby; decorations for a plate (La France roses), a lamp (sun-flowers), and a fish plate; a striking study of orchids, by Victor Dangon; numerous models for wood-carving, etc. An article on beds is profusely illustrated, as is one on dogs. The Moran and Buhot etching exhibitions are reviewed, and all departments of the magazine are ably sustained. Price, 35 cents. Montague Marks, 23 Union Square, N. Y.

WITHOUT doubt the most valuable contribution in *Harper's Magazine* for March, from the point of view of the greatest number of people, is Charles Dudley Warner's opening study of "The Great West—A Far and Fair Country." In his graceful, easy style Mr. Warner sweeps across the great Northwest from Minneapolis to Great Falls, and carries his reader along so pleasantly that one is never weary despite the distance. The facts and statistics presented are none the less instructive for being given in an entertaining way. Every intelligent man and woman will be interested in Mr. Warner's study—those in the East because it will teach them something, and those in the West because they will see themselves faithfully photographed therein. It follows, of course, that Mr. Warner's article is not free from criticisms; but fair, generous, intelligent criticism is agreeable to Western people. The value of the contribution is further enhanced by a particularly good map, based upon a map in *The Railway Age*.

#### GODEY'S LADY'S BOOK FOR 1888.

Sample Copy Fifteen Cents.

\$2 a Year ALWAYS IN ADVANCE.

A handsome Engraving to every Subscriber.

In Club with this paper, GODEY'S and the UNITED STATES MILLER, price \$2.50, which should be sent to the office of the United States Miller, Milwaukee, Wis.

#### MILL FOR SALE.

For Sale: One-half interest in a first-class 125-barrel Roller Mill. Has the latest improvements and doing a class of work that cannot be excelled in the State. Mill is situated in Southern Illinois, on Wabash Railroad, and in a good wheat country. Party desiring to sell his interest is obliged to go to Europe. The complete mill will be sold if desired. Address for full particulars, H. P., care Garden City Mill Furnishing Co., Chicago, Ill.

#### MILL FOR SALE.

A good 75 bbl. Roller (and Stone) process Mill for sale, located at Paola, Kansas, with good switch privileges. Can be run with Natural Gas. Terms easy. Address

GRIFFITH & PRICE, Kansas City, Mo.

## TESTS ON SPRING AND WINTER WHEATS.

Prof. V. Strebl, of Hohenheim, Germany, has been making some tests on winter, spring and spelz wheats with a view to determining their relative gluten contents. The wheats are stated to be those most in demand in trade; but no mention is made of American wheats and it is doubtful whether these were tested. The experiments were made on parcels of 110 lbs. wheat submitted to the milling process. Owing to the milling plant employed the results had to be limited to three grades of flour. In per centage of output the various grains tested yielded as below:

Variety.	Grade 1	Grade 2	Grade 3	Bran.	Loss.	Average	Variation.
Winter . . .	45.20	22.73	11.79	18.15	2.13	79.02	76.41-84.02
Spring . . .	46.03	20.74	12.00	19.83	1.87	78.80	76.83-81.33
Spelz . . .	42.01	18.91	15.48	20.85	2.75	76.40	72.90-79.62

To determine the gluten contents and baking qualities of each variety, flour No. 1 was subjected to tests in the aleurometer invented by Kunis. Great variations were evident between the flour even while the dough was being prepared, in respect to the amount of water required to make an equally stiff mixture. Also in washing out the gluten, for while from most samples this was easily obtained, in others the result was a more or less fluid mass, from which very little gluten could be separated. When secured, the properties of the gluten also varied much as to toughness, extensibility and color—differences which must be attributed to their varying composition. In the flours rich in gluten, the dry contents were considerably smaller than in others. The amount contained by the winter wheat samples varied between 17.8 and 36.6 per cent. Flour whose gluten contents marked less than 25 degs. by the aleurometer was too weak to be baked advantageously by itself. Among the spring wheat flours the gluten contents were highest in the Russian Saxonska wheat, varying between 20.1 and 41.9 per cent. The results were almost the same with spring and winter Shiriff wheat, though the baking tests showed the former to possess considerably better baking qualities. In deciding what wheat is most worthy of cultivation, Prof. Strebl remarks that it is necessary to take into account the quantity and quality of the yield, also the hardihood of the variety. But a combination of very high yield and quantity and quality of gluten contents is not as yet to be found in any variety of wheat. The wheat which is richest in gluten may not be the most valuable in baking, the latter depending on the proportion in which its proteine elements are present.—*Millers' Gazette* (London.)

## INDIAN BREAD.

A friend of the UNITED STATES MILLER has sent us the following, from the diary of Mrs. Ellen Goodnough, wife of a missionary to Oneida Indians, dated June 5, 1886:

"This morning I called a few girls into my kitchen to teach them the art of making yeast and bread. Many of the Indian families now use wheat flour. Ten years ago they only used it on great occasions, and at their feasts. Their own common bread is very hard to make, and indigestible for those who are not accustomed to it. It is made of white maize. The corn is shelled; boiled for a few minutes in strong lye; then washed thoroughly in cold water until the hulls come off. They have a mortar in each house made by burning a hollow in a

hard-wood log about three feet long; the maize, freed from its hulls, is then pounded into flour by a wooden or stone pestle; it is afterwards sifted through a sieve made of very fine strands of bark; it is then mixed with boiling water and kneaded into round flat cakes, which are baked in the ashes of the fire-place, or boiled like dumplings for an hour or more. Whole beans or dried berries are considered an improvement. The Indians declare that this bread of theirs will sustain life longer than any other article of food."

## NONSENSE.

"Ah, those autumn leaves, Farmer Robinson," sighed his city guest. "What lovely tints of color, and what an addition they are to the charming scenery you must so enjoy." "Yes, miss. The leaves are gettin' a good deal of yaller and red onto 'em, that's a fact. It's about time to gather—." "Then you really find time to gather autumn leaves?" "Oh, yes, indeed. We rake up a few cart-loads every year for beddin' for the horses." Another aesthetic dream smashed.

A PARISIAN relates that he had cut a slice of excellent Roquefort cheese, densely populated, and was about to swallow a mouthful, when a gentleman who had been sitting opposite rose suddenly from his seat, snatched the plate away, and exclaimed, most indignantly:

"You shall not eat this in my presence, sir!"

"Indeed! Why not, pray?" asked the astonished feuilletonist.

"Sir, I am a member of the Society for the Prevention of Cruelty to Animals!"

A SAFE INVESTMENT.—Omaha Youth—Yes, I am thinking of opening a notion and fancy goods store!

St. Louis Savant—Don't do it. Take the advice of an older man than yourself and keep out of lines in which values fluctuate. Fashions change, my boy, and prices change with them.

"I know, but I shall keep only standard articles."

"Won't do. There is no telling how soon the whims of the public may leave the so-called standard articles on your shelves. If you want to succeed don't deal in luxuries; deal in necessities, things people can't live without and which can't be affected by every breeze from Paris."

"You mean that I should sell groceries?"

"Groceries! No. Whiskies."—*Omaha World*.

MISS SAWYER, who is poor, was introduced at a lunch party to Miss Taylor, who is rich, and was coldly received. Miss Sawyer is bright and knows her own antecedents and Miss Taylor's also. She was unabashed and spoke cheerily: "I am so glad to meet you. I have often wanted to. It's so funny—my name is Sawyer and my grandfather was a tailor, and your name is Taylor and your grandfather was a sawyer. Mine used to make clothes for yours, and yours used to saw wood for mine."

THE ARTLESS CHILD.—Mamie (six years old to lady caller)—Mamma said to ask you to sit down a few minutes and she would be right in. It isn't raining, is it?

Lady Caller—Why, no, Mamie. Why did you think it was?

Mamie—Because, when mamma saw you coming, she said, "it never rains but it pours."—*Texas Siftings*.

AN UNJUST CRITICISM—Countryman (in a Bowery picture gallery)—The cows is all right, an' the trees look kinder nateral, but the river there behind 'em is painted mighty poor.

Dealer—If you are up in art at all, my friend, you will know it is impossible to make water and oil mix well.—*New York Sun*.

A NATURAL RESULT.—Doctor (feeling patient's pulse)—You are suffering, sir, from nervous prostration in a very aggravated form. Have you been drinking deeply of late?

Patient (feeble)—No, sir: I've been Christmas shopping with my wife.—*Epoch*.

SHE WAS FROM BOSTON.—Cadet (vain-gloriously)—I'm afraid we fighting men are too susceptible, Miss Brenton.

Miss Brenton—Yes; how awfully susceptible Mr. Smith was to Mr. Kilrain, wasn't he?

A GIRL EASY TO SUIT.—A picture of a handsome young man is stowed away in a neglected corner of a portrait painter's studio up-town. The artist was asked whom it belonged to, and he replied:

"Just before starting on a trip across the water I received an order for that picture from the young lady to whom the original was betrothed. As there was apparently no hurry about the work, I suggested that it should be done at my leisure while abroad. This being agreed upon, I had no further communication with the party until my return a year and a half later. When I called upon the lady and informed her that the picture was ready, she seemed slightly embarrassed, but promised to call at the studio and see it. A few days later she came, and, after gazing steadily at the canvas for some time, she sighed and said:

"Poor Phil! he's dead and gone!"

"Then with a sudden look of relief and inspiration, she added:

"But I think if you could change the expression slightly and alter the mouth, it would be a good likeness of Mr. C——, the gentleman I am now engaged to!"

"I kept the picture as you see. To have allowed that cold-blooded heartless woman to take possession of it would have seemed an insult to the dead man's memory. So there it always hangs, a sort of illustration of poor, old Rip's words: 'How soon we are forgot'!"—*New York World*.

WAS RELIEVED.—An Ohio editor was interrupted by a boy who entered his room.

"What do you want?" the editor darkly frowning, demanded.

"I have come to tell you, sir, that your wife run away with a shoemaker."

"Oh, is that it? I thought that the foreman had sent for more copy."—*Arkansaw Traveler*.

STICKING TO THE FACTS.—Attorney (defending a prisoner)—Your honor, I would call the attention of the court to that noble utterance of the Master, "Let him who is without sin cast the first stone" and—

Judge (interrupting)—You will confine your argument, sir, to the testimony. It wasn't a stone the prisoner threw at the witness, but a brick.—*Washington Critic*.

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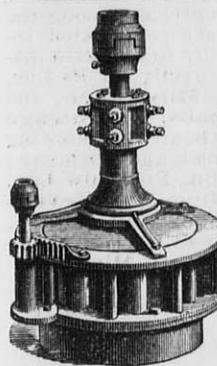
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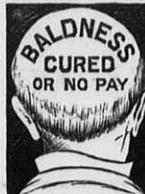
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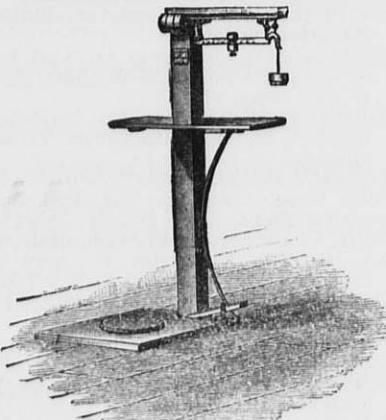
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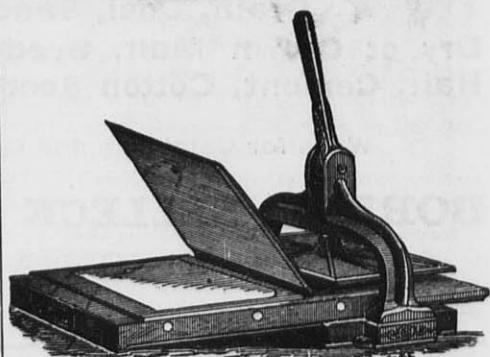
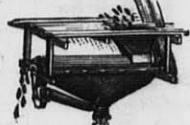
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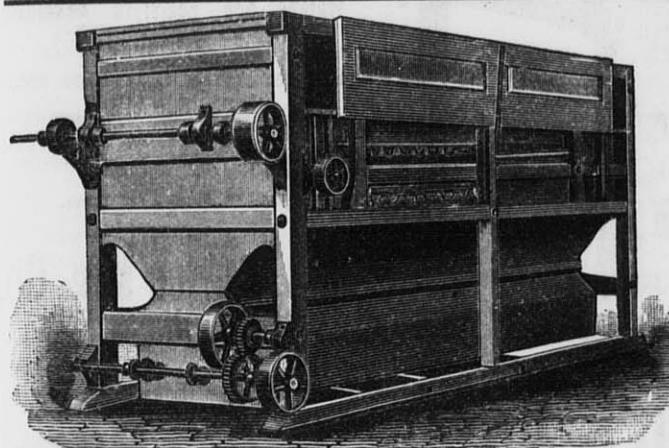
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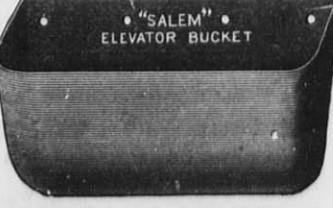


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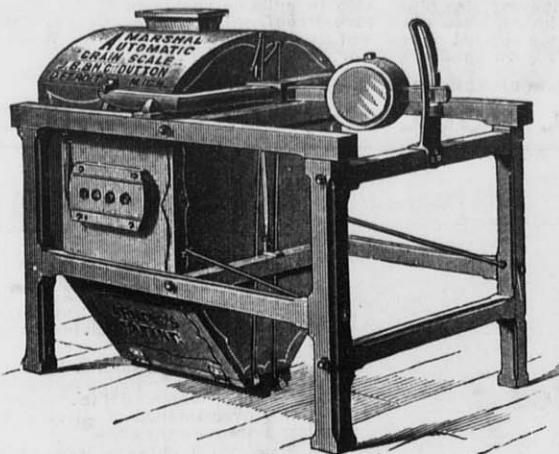
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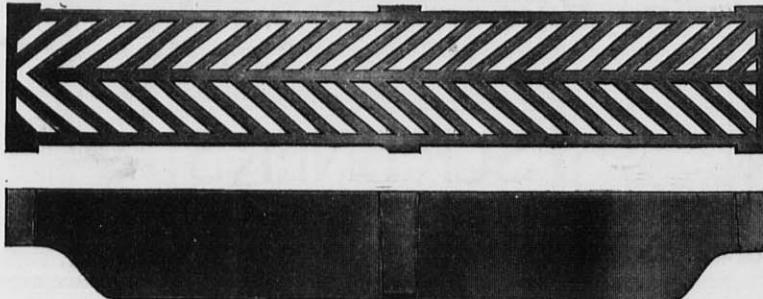
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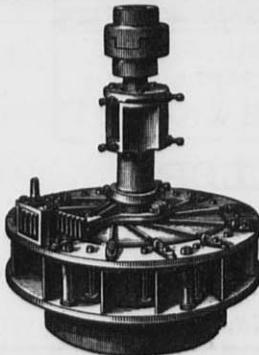
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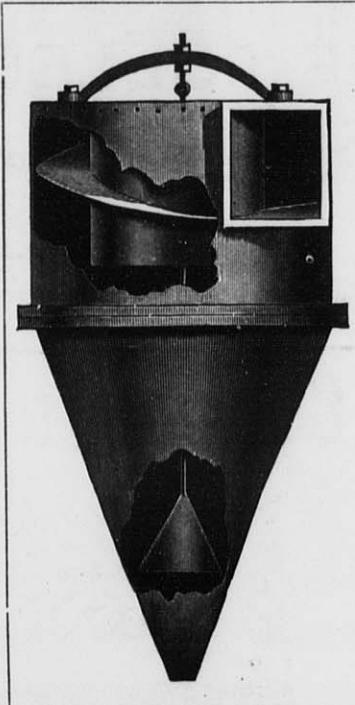
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